

Res. Asst. PhD SİNAN DEĞİRMENCİ

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International Researcher IDs

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Publons / Web Of Science ResearcherID: M-7694-2013

ScopusID: 57188924797

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Education Information

Doctorate, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (Dr) (Tıp), Turkey 2016 - 2021

Postgraduate, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (YI) (Tezli) (Tıp), Turkey 2014 - 2016

Undergraduate, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 2008 - 2013

Undergraduate, Anadolu University, Faculty Of Economics, Department Of Public Administration, Turkey 2007 - 2012

Foreign Languages

English, C1 Advanced

Dissertations

Postgraduate, Ventriküler kardiyomiyositlerde hücre içi serbest ZN2 artışının K-kanal akımlarına etkisinin incelenmesi, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (YI) (Tezli) (Tıp), 2016

Research Areas

Biophysics, Biophysics

Academic Titles / Tasks

Research Assistant PhD, Eskisehir Osmangazi University, TIP FAKÜLTESİ, TEMEL TIP BİLİMLERİ BÖLÜMÜ, 2021 - Continues

Research Assistant, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (Dr) (Tıp), 2016 - 2021

Research Assistant, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (YI) (Tezli) (Tıp), 2015 - 2016

Research Assistant, Eskisehir Osmangazi University, TIP FAKÜLTESİ, TEMEL TIP BİLİMLERİ BÖLÜMÜ, 2015 - 2015

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **STIM1-Orai1 interaction mediated calcium influx activation contributes to cardiac contractility of insulin-resistant rats**
Durak A., Olğar Y., Genc K., Tuncay E., Akat F., Değirmenci S., Turan B.
BMC Cardiovascular Disorders, vol.22, no.1, 2022 (SCI-Expanded)
- II. **Ticagrelor alleviates high-carbohydrate intake induced altered electrical activity of ventricular cardiomyocytes by regulating sarcoplasmic reticulum-mitochondria miscommunication**
OLĞAR Y., DURAK A., Degirmenci S., TUNCAY E., BİLLUR D., ÖZDEMİR S., Turan B.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.476, no.10, pp.3827-3844, 2021 (SCI-Expanded)
- III. **Interrelated In Vitro Mechanisms of Sibutramine-Induced Cardiotoxicity**
Alyu F., OLĞAR Y., DEĞİRMENCİ S., TURAN B., ÖZTÜRK Y.
CARDIOVASCULAR TOXICOLOGY, vol.21, no.4, pp.322-335, 2021 (SCI-Expanded)
- IV. **Ageing-associated increase in SGLT2 disrupts mitochondrial/sarcoplasmic reticulum Ca(2+)homeostasis and promotes cardiac dysfunction**
OLĞAR Y., TUNCAY E., Degirmenci S., BİLLUR D., Dhingra R., Kirshenbaum L., Turan B.
JOURNAL OF CELLULAR AND MOLECULAR MEDICINE, vol.24, no.15, pp.8567-8578, 2020 (SCI-Expanded)
- V. **beta(3)-adrenergic receptor activation plays an important role in the depressed myocardial contractility via both elevated levels of cellular free Zn²⁺ and reactive nitrogen species**
TUNCAY E., OLĞAR Y., DURAK A., Degirmenci S., BİTİRİM C. V., Turan B.
JOURNAL OF CELLULAR PHYSIOLOGY, vol.234, no.8, pp.13370-13386, 2019 (SCI-Expanded)
- VI. **A SGLT2 inhibitor dapagliflozin suppresses prolonged ventricular-repolarization through augmentation of mitochondrial function in insulin-resistant metabolic syndrome rats**
DURAK A., OLĞAR Y., Degirmenci S., AKKUŞ E., TUNCAY E., Turan B.
CARDIOVASCULAR DIABETOLOGY, vol.17, 2018 (SCI-Expanded)
- VII. **Aging related functional and structural changes in the heart and aorta: MitoTEMPO improves aged-cardiovascular performance**
OLĞAR Y., DEĞİRMENCİ S., DURAK BATIGÜN A., BİLLUR D., CAN B., Kayki-Mutlu G., Arioglu-Inan E. E., TURAN B.
EXPERIMENTAL GERONTOLOGY, vol.110, pp.172-181, 2018 (SCI-Expanded)
- VIII. **Cytosolic increased labile Zn²⁺ contributes to arrhythmogenic action potentials in left ventricular cardiomyocytes through protein thiol oxidation and cellular ATP depletion**
DEĞİRMENCİ S., OLĞAR Y., DURAK BATIGÜN A., Tuncay E., TURAN B.
JOURNAL OF TRACE ELEMENTS IN MEDICINE AND BIOLOGY, vol.48, pp.202-212, 2018 (SCI-Expanded)
- IX. **Interplay Between Cytosolic Free Zn²⁺ and Mitochondrion Morphological Changes in Rat Ventricular Cardiomyocytes**
BİLLUR D., Tuncay E., Okatan E. N., OLĞAR Y., DURAK BATIGÜN A., DEĞİRMENCİ S., CAN B., TURAN B.
BIOLOGICAL TRACE ELEMENT RESEARCH, vol.174, no.1, pp.177-188, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **Tip 1 Diyabetli Sıçan Kalbi Elektriksel ve Mekanik Aktivitelerine Antiagregan Ajan Tikagrelorun Etkisinin İncelenmesi**
DURAK A., TUNCAY E., DEĞİRMENCİ S., TURAN B.
Journal of Ankara University Faculty of Medicine, vol.74, 2021 (Peer-Reviewed Journal)
- II. **An Investigation on Molecular Basis of the Effects of SGLT2 İnhibitor Dapagliflozin on Hyperglycemia-Associated Heart Dysfunction**
Durak A., OLĞAR Y., DEĞİRMENCİ S., Ertürk N., AKBAŞ M. T., AYGÜN A., DENİZ M. C., ERCİYAS M. F., YAZAR B. T., YILMAZ M. S., et al.
Journal of Ankara University Faculty of Medicine, vol.71, no.3, pp.131-138, 2018 (Peer-Reviewed Journal)
- III. **Pioglitazonun Metabolik Sendromlu Sıçan Kalp Fonksiyonuna Etkisinin Elektrofizyolojik Yönelimlerle İncelenmesi**
TOY A., TUTAR M. F., OLĞAR Y., OKATAN E. N., DEĞİRMENCİ S., TURAN B.

Books & Book Chapters

- I. **İyon Kanalları ve Kanser**
Değirmenci S., Değirmenci M. D.
in: Kanser Genetiği ve Moleküler Biyolojisi, Değirmenci İrfan, Editor, Nobel Yayınevi, Ankara, pp.493-506, 2022
- II. **FLAVONOİDLERİN KARDİOVASKÜLER SİSTEM VE İYON KANALLARI ÜZERİNE ETKİLERİ**
Değirmenci S., Değirmenci M. D.
in: Multidisipliner Yaklaşımlarla Vitaminler, Özyiğit Filiz, Editor, Akademisyen Kitabevi, Ankara, pp.401-407, 2022
- III. **OBEZİTE TEDAVİSİNDE HEDEFLenen İYON KANALLARI**
Değirmenci M. D., Değirmenci S.
in: Obeziteye Multidisipliner Bakış, Özyiğit Filiz, Editor, Akademisyen Kitabevi, Ankara, pp.293-305, 2021

Refereed Congress / Symposium Publications in Proceedings

- I. **The Possible Role of Insulin on Cellular Therapy in Diabetic Cardiomyopathy**
TOY A., DEĞİRMENCİ S., TURAN B.
INTERNATIONAL SYMPOSIUM ON CELLULAR THERAPY IN CARDIOVASCULAR MEDICINE: STEM CELL OPPORTUNITY, Ankara, Turkey, 30 October - 01 November 2019
- II. **ATP-activated Cation Channels as a New Cellular Therapeutic Target for Atrial Dysfunction**
Değirmenci S., Uğur M., Turan B.
INTERNATIONAL SYMPOSIUM ON CELLULAR THERAPY IN CARDIOVASCULAR MEDICINE: STEM CELL OPPORTUNITY, Ankara, Turkey, 30 October - 01 November 2019
- III. **Memeli Atriyal Hücrelerinde ATP-duyarlı Katyon Kanallarının Elektrofizyolojik Yöntemlerle İncelenmesi**
DEĞİRMENCİ S., UĞUR M., TURAN B.
31. ULUSAL BİYOFİZİK KONGRESİ, Adana, Turkey, 9 - 12 October 2019
- IV. **Effects of a sglt2 inhibitor on intracellular ion levels and mitochondrial membrane potential in ventricular H9c2 cell line**
DEĞİRMENCİ S., TOY A., OLĞAR Y., Tuncay E., TURAN B.
JOINT 12th EBSA congress 10th ICBP – IUPAP congress, Madrid, Spain, 20 - 24 July 2019, vol.48, pp.1-264
- V. **Mitochondria-Targeted Antioxidants in Aging related functional changes in the heart and aorta: MitoTEMPO improves aged-cardiovascular performance**
OLĞAR Y., DEĞİRMENCİ S., TOY A., TURAN B.
13 th Conference on Mitochondrial Physiology MIP2018/ MitoEAGLE, Jurmala, Latvia, 18 - 21 September 2018
- VI. **The effects of leptin cardiac function in streptozotoin diabetic rats**
ARIOĞLU İNAN E., ERDOĞAN B. R., MÜDERRİSOĞLU A. E., KARAÖMERLİOĞLU İ., YEŞİLYURT Z. E., DEĞİRMENCİ S., TURAN B., ALTAN V. M.
Pharmacology 2017, Londrina, Brazil, 11 - 13 December 2017
- VII. **The effects of leptin on cardiac function in streptozotocin diabetic rats**
ARIOĞLU İNAN E., KAYKI MUTLU G., ERDOĞAN B. R., Müderrisoğlu A. E., KARAÖMERLİOĞLU İ., Yeşilyurt Z. E., DEĞİRMENCİ S., TURAN B., ALTAN V. M.
Pharmacology 2017, Londrina, Brazil, 11 - 13 December 2017
- VIII. **Impaired mitochondrial function seems contributing to aging-associated abnormal heart function via increased production of reactive oxygen species**
OLĞAR Y., TOY A., DEĞİRMENCİ S., tuncay e., TURAN B.
12TH conference on Mitochondrial Physiology, Hradec-Kralove, Czech Republic, 15 - 18 November 2017
- IX. **Ventriküler Kardiyomiyositlerde Hücre İçi Zn²⁺ Artışının K Akımları ve Aritmi Üzerine Etkileri**

DEĞİRMENCİ S., OLĞAR Y., TURAN B.

28. ve 29. Ulusal Biyofizik Kongresi, İstanbul, Turkey, 6 - 09 September 2017

X. **The Effects of Intracellular Free Zn²⁺ Increase on K Currents and Arrhythmia in Ventricular Cardiomyocytes**

DEĞİRMENCİ S., OLĞAR Y., TURAN B.

Uluslararası Katılımlı 28-29. Ulusal Biyofizik Kongresi, İstanbul, Turkey, 6 - 09 September 2017

XI. **Increased cytosolic free Zn²⁺ alters action potential parameters via activation of KATP-channels in rat ventricular cardiomyocytes**

DEĞİRMENCİ S., OLĞAR Y., TUNCAY E., TURAN B.

34th Annual Meeting, European Section of the International Society for Heart Research, 24 - 27 July 2017, vol.109, pp.1-62

XII. **AN IN VITRO STUDY ON REGULATION OF INTRACELLULAR FREE Zn²⁺ IN VENTRICULAR CARDIOMYOCYTES**

OLĞAR Y., Tuncay E., TOY A., DEĞİRMENCİ S., BİLLUR D., CAN B., TURAN B.

Dietary supplements vs food biofortification and the gut microbiome: human and animal health outcomes, Sofya, Bulgaria, 22 - 23 March 2016

XIII. **Both Hyperglycemia and Hyperinsulinemia Induce Changes in Voltage Dependent K Channel Currents in H9c2 Ventricular Cells**

DEĞİRMENCİ S., OLĞAR Y., TOY A., TURAN B.

Biophysical Society 60th Annual Meeting, Los-Angeles, Chile, 27 February - 02 March 2016

XIV. **An Investigation on Electrical Activity and Sarcolemmal K Channels in Cardiomyocytes from Insulin Resistant Rat Heart**

TOY A., OLĞAR Y., DEĞİRMENCİ S., Tuncay E., TURAN B.

Biophysical Society 60th Annual Meeting, Los-Angeles, Chile, 27 February - 02 March 2016

XV. **H9c2 Ventrikül Hücre Hattında Glukoz ve İnsülinin Voltaj bağımlı K Kanal Akımlarına Etkilerinin İncelenmesi**

DEĞİRMENCİ S., OLĞAR Y., TOY A., TURAN B.

27. ULUSAL BİYOFİZİK KONGRESİ, Malatya, Turkey, 29 September - 03 October 2015

XVI. **Monitoring of intracellular free Zn²⁺ and Ca²⁺ changes in cardiomyocytes from metabolic syndrome rats**

TOY A., OKATAN E. N., DEĞİRMENCİ S., TURAN B.

EXPERIMENTAL BIOLOGY 2015, 28 March - 01 April 2015

XVII. **Roles of Intracellular Free Zn²⁺ on Electrical and Mechanical Activities of the Heart**

DEĞİRMENCİ S., TURAN B.

EXPERIMENTAL BIOLOGY 2015, Boston, United States Of America, 28 March - 01 April 2015

Memberships / Tasks in Scientific Organizations

Türk Biyofizik Derneği, Member, 2018 - Continues, Turkey

Scientific Refereeing

FUNCTIONAL AND INTEGRATIVE GENOMICS, Journal Indexed in SCI-E, October 2023

Archives of the Turkish Society of Cardiology, National Scientific Refreed Journal, May 2022

Metrics

Publication: 32

Citation (WoS): 202

Citation (Scopus): 210

H-Index (WoS): 5

H-Index (Scopus): 5

Awards

Değirmenci S., Olğar Y., Turan B., Poster Bildiri Birincilik Ödülü, Türk Biyofizik Derneği, September 2017